

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1, 2, 4-17, 26-29, 31-40, 49, and 51-82 are pending in the application, with 1, 26, 49, 53, 57, and 61 being the independent claims. Claims 3, 18-25, 30, 41-48, and 50 were previously cancelled. Claims 61-82 are new. Claims 1, 4, 7, 9, 10, 14, 15, 33-37, 53-55, and 57-59 are amended. These amendments are made to more particularly recite the claimed embodiments of the present invention, and are not made to avoid prior art, and thus should not create any estoppel. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Allowable Subject Matter

Applicants acknowledge with appreciation the Examiner's indication that claims 53-60 are allowed, and that claims 9-12 and 35-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 53-55 and 57-59 were amended above to more particularly recite the claimed embodiments of the invention. Applicants respectfully request that the Examiner provide an indication of the allowability of these claims.

Applicants note that new claims 68-71, which depend from new independent claim 61, are similar to objected claims 9-12, and therefore should be allowable for at least the same reasons as claims 9-12, and further in view of their own features. Furthermore, new claims 79 and 80 depend from allowed claim 53, and therefore should also be indicated as allowed.

Rejections under 35 U.S.C. § 102

In paragraph 3 of the Office Action, claims 1-2, 4-8, 13-17, 26-29, 31-34, 39, 40, 49, 51 and 52 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,471,665 to Pace *et al.* (hereinafter Pace). Applicants respectfully traverse this rejection.

Technical differences exist between Pace and the claimed embodiments of the present invention. In paragraph 6, the Office Action states:

Pace, as shown in figure 2, teaches the integrator having the transconductance amplifier (18) that is controlled by the gain control signal (124) and the output of the transconductance amplifier (18) that is controlled by the gain control signal (124) and the output of the transconductance amplifier (18) is used to charge the floating capacitor (16). The significance of this is that the capacitance of the capacitor (16) is varied while being charged, regardless of being charged up or down. See column 4, lines 6-19. Because of the varying the capacitance, the

time constant as well as the frequency response of the integrator is also varied.

Applicants disagree with this characterization of Pace. Nowhere does Pace state that the capacitance of capacitor 16 is varied. Furthermore, Pace does not show any mechanism for varying the capacitance of capacitor 16. As described in column 4, lines 6-19 of Pace, capacitor 16 is a "floating capacitor." "The capacitor 16 is 'floating' in the sense that it is connected across the outputs of the transconductance amplifier 18, and not to ground." Thus, that capacitor 16 is a "floating capacitor" does not mean that capacitor 16 is variable. Nowhere does Pace teach an integrator having a time constant that is variable, as recited in claim 1.

Furthermore, Pace states:

An important element in the differential integrator 120 is the first transconductance amplifier 18 which charges the floating capacitor 16. The gain $gm1$ of the transconductance amplifier 18 is controlled by INTEGRATOR GAIN CONTROL 124.

(col. 4, lines 14-19). Thus, as stated in Pace, the gain of transconductance amplifier 18 is controlled by integrator gain control 124. Integrator gain control 124 does not control the timing constant of any integrator. Nowhere does Pace teach the time constant of the integrator being variable according to at least one control signal to vary a frequency response of the integrator, as recited in claim 1.

Thus, Applicants assert that claim 1 is patentable over Pace for at least the reasons described above. Furthermore, independent claims 26 and 49, and new independent claim 61, are also patentable over Pace for at least these reasons, and further in view of their own features. Claims 2, 4-8, 13-17, 27-19, 31-34, 39, 40, 50-52, 62-78, 81, and 82, which depend from independent claims 1, 26, 49, and 61, are also patentable over Pace for the reasons describe above, and further in view of their own features. Accordingly, Applicants respectfully request that the rejection of these claims be reconsidered and withdrawn.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Jeffrey S. Weaver", written over a horizontal line.

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